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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/402,262

02/28/2000

BARBARA L. JONES

14.442

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27717

7590

10/04/2004

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CHICAGO, IL 60603-5803

EXAMINER

DANG, HUNG Q

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/402,262

Applicant(s)

JONES ET AL.

Examiner

Hung Q Dang

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) 6-12 and 18-25 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 and 13-16 is/are rejected.
7) ☒ Claim(s) 5 and 17 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.7.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to applicant's response received on 7/16/2004. Applicant's election of claims 1-23 have been entered.

2. Claims 24-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/16/2004.

Claim Objections

3. Claims 6-12 and 18-23 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, claims 6-12 and 18-23 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 4 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. To be specific, the claim limitation in claims 14 and 16 "step of division being

adapted to effect said division on an interdigitated non-chopping data-allocation basis in which a degree of data element transmission time overlap between channels is permitted" is not clearly understood and the specification (page 6, lines 12-22) does not clearly provide support for said claimed limitation.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breckel et al. U.S. Patent 4,738,133 in view of Adachi et al. U.S. Patent 5,509,013.

Regarding claim 1, Breckel et al. teaches a method of wireless transmission of data in analog format through a communication channel from at least two local data sensors (Figure 1, units 1, 2 or 3) to a data processing means (Figure 1, unit 5), said method comprising the step of division of said channel into sub-channels and transmitting said data from said data sensors respectively through said sub-channels accordingly (column 2 lines 24-31);

However, Breckel et al. does not specifically teach said sub-channels having unequal data carrying capacities and data rates; and allocating data from said local data

sensors to respective ones of said sub-channels in accordance with the data carrying capacities of said sub-channels.

Adachi et al. discloses a transmission system having a multiplexer for providing many sub-channels (these are considered to be sub-channels of a single channel) having different data transmission speeds to suit economical demands (column 1, lines 10-18). One skilled in the art would recognize that data transmission speed is proportionally related to data carrying capacity. High data speed would result in high data transmission. High data capacity would also result in high data transmission since both data carrying capacity and data rate are time dependent. One skilled in the art would also recognize that allocating more data to be transmitted through a high data transmission speed/capacity channel and less data to be transmitted through a low data transmission speed/capacity channel would have been obvious and logical in order to efficiently and optimally transmit different amount of data through different sub-channels simultaneously.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide different data transmission speeds/data carrying capacities to the sub-channels disclosed by Breckel et al., as evidenced by Adachi et al., in order to efficiently and optimally transmit different amount of data from the sensors (1, 2 and 3) to the receiver (5) disclosed Breckel et al., as explained above.

Claim 13 is rejected for the same reasons as claim 1.

Regarding claims 2 and 14, Breckel et al. also teaches the division of said sub-channels being effected on a frequency basis (column 2, lines 26-29).

Regarding claims 3 and 15, Breckel et al. also teaches the division of said sub-channels being effected on a time-division basis (column 2, lines 20-22).

Allowable Subject Matter

8. **Claims 5 and 17** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior arts of record fail to teach or disclose a method of wireless transmission of data as claimed in claim 1, wherein the step of division of said sub-channels being effected by packet-switching of data from said local data sensors, and interleaving said data packet with an unsymmetrical packet distribution.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q Dang whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2635

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ted

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

